BONNEVILLE POWER ADMINISTRATION FIBER-OPTIC CABLE PLAN WORKSHOP

Third-party/joint ownership through limited competition for new fiber-optic projects

Purpose

BPA is inviting anyone who is interested to a workshop Aug. 9, 2000. The workshop will explore opportunities for third-party or joint ownership of new fiber-optic cable installed on the BPA transmission system. While BPA is encouraging third-party ownership proposals, it has developed no methods to put such proposals in place. The workshop will go through rules governing the transmission system and its use. Those taking part in the meeting will look for ideas on how to create third party or joint ownership given those ground rules. The workshop is an opportunity for anyone who is interested to ask questions, discuss concerns and brainstorm concepts.

Background

As part of its budget review process, Congress requested three federal power marketing agencies to submit a joint report covering certain issues associated with the use of fiber-optic cable for the telecommunication needed to operate each agency's transmission system. The agencies are Southwestern Power Administration, Western Area Power Administration and BPA. The joint report as well as BPA's report was submitted to Congress in May 2000. Within the report, BPA said it would encourage third-party or joint ownership through limited competition for new fiber-optic projects, where such ownership meets BPA's pole attachment criteria and is the least cost alternative.

BPA's fiber program

BPA installs fiber-optic cable to upgrade its telecommunications system to meet present and future transmission operating needs while minimizing the costs paid by ratepayers.

Because BPA anticipates exponential increases in operational data traffic in the future, it is more cost-effective to install cable with capacity in excess of what is needed today. To offset some of the installation costs, BPA is leasing to others the temporarily excess dark – or unlit – fibers.

In addition, because of the geographic reach of BPA's existing transmission system, there is an opportunity to provide "public benefits." The agency offers interconnection to companies or organizations that in turn offer rural communities fiber-optic capabilities. For this purpose, BPA temporarily leases dark fibers that are now excess to its operational needs at the same rate offered to urban areas, rather than the higher rates rural areas normally have to pay.

BPA does not provide telecommunications services to others. In fact, BPA will only lease dark fibers. Others can then light this dark fiber to

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provide lit telecommunications services such as Internet access, voice and data transmission, or other telecommunications services. BPA is not in the business of providing commercial telecommunications services and has no plans to do so in the future.

Current fiber-optic lease policy

To date, BPA has leased temporarily excess dark fibers to others. Based on its forecast of operating needs, BPA leases these excess fibers for five to 25 years. BPA uses a similar terms and conditions contract format, but with varying pricing strategies such as annual payments or one-time upfront payments. The agency funnels these funds back into its budget to offset the costs of other capital intensive transmission projects and therefore lowering the rate it charges its transmission customers.

Several types of commercial lease arrangements can be negotiated:

1. Projects funded in advance. The outside party pays for part or all of the costs of materials and installation up-front, in exchange for temporary use of some of the fibers.
2. Fixed fee. BPA finances the materials and installation of the fiber-optic cable. The outside party pays an annual or one-time fixed fee for the lease of the dark fibers.
3. Equipment or services agreement. BPA or the outside party may finance construction. This type of arrangement may involve the exchange of equipment or services in lieu of cash payments.
4. Hybrid. The above arrangements may be combined in an agreement that makes the best business sense.

In these cases, BPA must have an operational need to install fiber on an existing transmission route. BPA owns all the fiber-optic cable and retains at least 12 fibers for operational use. BPA retains ownership and maintenance responsibility for the entire fiber-optic cable. It provides terminal equipment only for its own uses and lessees are responsible for providing their own electronic terminal equipment.

Current issues associated with third-party/joint ownership

1. Fiber-optic pole attachment policy and safety criteria.

For reliability and safety reasons, BPA normally does not allow fiber-optic cable owned by others to be attached to any of its transmission structures. Instead, leases are offered for use of BPA-owned temporarily excess dark fiber. BPA has identified an operational need before installing fiber on any of its existing transmission system. The policy also says that no “foreign” fiber will be allowed within fenced substation yards, including storage yards and maintenance facilities.

The purpose of the policy is to ensure that the transmission system operates efficiently and safely. The fiber-optic communication system provides the path for telemetry, control and protection of the BPA power system. It is the means by which BPA is notified of any disturbances on the system. It enables BPA personnel to reroute electricity as needed to continually supply power to its customers and nearly 8 million people across the Northwest. In addition, its transmission towers and poles are designed to carry only a certain amount of weight and more attachments to them could jeopardize their integrity.

The policy is also designed to ensure the safety of BPA line personnel who work on the structures and lines, as well as in substations and others who work near those facilities. The fiber-optic communication system ensures that personnel know when a line is energized or not. It would be imperative that a third-party owner shares this responsibility to protect lives. Safety is a paramount concern in the energy business.

BPA does not allow contract crews into BPA substations without a BPA employee present. People have lost their lives working around high-voltage lines without proper safety precautions.

2. Reliability

BPA's priority is to keep electricity flowing throughout the Northwest and to protect federal transmission assets. Its fiber-optic communications system is critical to doing that.

The Western Systems Coordinating Council sets reliability standards for all western electric utilities, including BPA. These standards recognize the importance of communications to control the reliable operation of the power grid in the western United States. Without dependable and readily available communication circuits BPA would be unable to meet its own and WSCC's performance standards. That's because if there are power outages on the communication circuits or they are taken out of service for some reason, it impacts the entire BPA transmission system and could affect the reliability of the entire western power grid – from Canada to California.

Naturally, BPA is concerned that these reliability standards are met and would not be jeopardized by third-party ownership of fiber-optic cable on its structures.

3. Maintenance

Bonneville is responsible for the maintenance of its transmission and fiber-optic systems. This includes planned maintenance, as well as restoration following an outage or a system disturbance. BPA maintenance personnel's priority is to restore the transmission system to deliver electricity to its many customers. Presently, only BPA personnel or BPA approved contractors may do work on its systems.

In order to perform maintenance, BPA personnel must first obtain clearances from BPA dispatchers for safety and reliability reasons. They also must notify all clients who may be affected because of the work being done. And, they must obtain additional clearances from any number of agencies if the line crosses their domains. For example, BPA recently had to cross the properties of 16 entities when working on one line and had to obtain permission from each. Entities may include such groups as the Federal Aviation Administration, railroads, Indian tribes, state and county highway departments, the Forest Service, the Environmental Protection Agency and Bureau of Land Management as well as private land owners.

BPA's priority in restoring transmission and fiber optic cable is: transmission facilities, active BPA fibers, active client fibers and other fibers.

Many questions need to be considered when addressing the maintenance of a fiber-optic cable owned by a third-party.

4. Rights-of-way and easements

Ninety-five percent of BPA's rights-of-way are obtained through easements and permits from property owners. It owns only 5 percent of its rights-of-way. Generally, an easement allows BPA to cross a property owners' lands and install transmission related structures. In each case, the purpose is to operate the transmission system. BPA cannot apportion these rights for other purposes, such as for a gas pipeline or commercial communication lines. Because of the limited purpose of BPA's easements and permits, third-party owners would need to assume all risks for obtaining sufficient land rights from the respective landowners.

Perhaps the most promising option for installing third-party-owned fiber-optic cable would be on the property BPA owns outright and completely controls. The agency does allow others to bury cable on such a right-of-way.

Summary

The realities outlined here are the challenges that must be overcome to enable third-party ownership of fiber-optic cable on BPA structures. As outlined, BPA's operational needs take precedence over commercial opportunities with its fiber-optic telecommunications system.

Participants at BPA's workshop are encouraged to brainstorm solutions and answers to these many questions raised in relation to third-party ownership of fiber-optic cable.

Fiber-optic Cable Plan Workshop

Wednesday, August 9, 2000
1 –3 p.m.
Bonneville Power Administration
DOB-1 Auditorium
5411 N.E. Highway 99
Vancouver, Wash. 98666

For more information

Contact: Mike Hansen (503) 230-4328.

Or, go to our website at:
http://www.transmission.bpa.gov/orgs/t/tn/tnf/fiberoptic/